

EXHIBIT No. 7

Deposition of Bradley Probst

LaCroix v. Healy, et vir

September 18, 2018



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<p style="text-align: center;">Page 1</p> <p>IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON IN AND FOR THE COUNTY OF KING</p> <hr/> <p>KRISTIN LA CROIX,) Plaintiff,) vs.) No. 17-2-04131-9 SEA LAURA JEAN HEALY AND JOHN DOE) HEALY, individually and as wife) and husband, and the marital) community composed thereof,) Defendants.)</p> <hr/> <p>DEPOSITION UPON ORAL EXAMINATION OF BRADLEY PROBST</p> <hr/> <p>Taken at 2601 Fourth Avenue, Floor 6 Seattle, Washington</p> <hr/> <p>DATE TAKEN: SEPTEMBER 18, 2018 REPORTED BY: ANITA W. SELF, RPR, CCR #3032</p>	<p style="text-align: right;">Page 3</p> <p>1 DEPOSITION OF BRADLEY PROBST 2 EXAMINATION INDEX 3 EXAMINATION BY: PAGE 4 MR. PRINCE-OLSEN 4 5 EXHIBIT INDEX 6 EXHIBITS FOR IDENTIFICATION PAGE 7 1 Report 7 8 2 David Wells' Report 29 9 3 Email dated July 18, 2018 32 10 * * * * *</p>
<p style="text-align: center;">Page 2</p> <p>1 APPEARANCES 2 FOR THE PLAINTIFF: 3 BRYAN PRINCE-OLSEN 4 GLP Attorneys, P.S., Inc. 5 2601 Fourth Avenue, Floor 6 6 Seattle, Washington 98121 7 206.957.2534 8 bolsen@glpattoorneys.com 9 FOR THE DEFENDANTS: 10 TAYLOR DAWSON 11 Law Offices of Mark Dietzler 12 1001 Fourth Avenue, Suite 3300 13 Seattle, Washington 98154 14 206.473.4047 15 taylor.dawson@libertymutual.com 16 * * * * *</p>	<p style="text-align: right;">Page 4</p> <p>1 SEATTLE, WASHINGTON; SEPTEMBER 18, 2018 2 9:19 A.M. 3 -00o- 4 5 BRADLEY PROBST, witness herein, having been 6 first duly sworn on oath, 7 was examined and testified 8 as follows: 9 10 E X A M I N A T I O N 11 BY MR. PRINCE-OLSEN: 12 Q. Good morning, Mr. Probst. My name is Bryan 13 Prince-Olsen. I'm one of the attorneys representing 14 the plaintiff, Kristin La Croix, in this case. 15 You've been listed as an expert, so we're 16 taking your deposition to find out what your testimony 17 will be at trial. Have you ever been deposed before? 18 A. I have. 19 Q. All right. 20 And I'm sure your attorney has gone over this 21 with you, but let me just give you a few ground rules 22 for today's proceeding. 23 We have a court reporter who's taking down a 24 transcript of everything that's being said in this 25 room, so it's important that we speak one at a time to</p>

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<p style="text-align: right;">Page 5</p> <p>1 make her job a little easier. 2 Also, please make sure you give verbal 3 responses. It's difficult for her to note if you're 4 nodding your head or saying um-hmm or hmm-mm. 5 Okay? 6 A. We won't look at the transcript for those. 7 Q. If you ever don't understand my question, 8 will you let me know that? 9 A. Yes. 10 Q. Okay. 11 Otherwise, if you answer the question, is it 12 fair to assume that you understood what I asked? 13 A. Sure. 14 Q. Okay. 15 Can you please say and spell your full name 16 for the record? 17 A. Bradley William Probst, B-R-A-D-L-E-Y, 18 W-I-L-L-I-A-M, P-R-O-B-S-T. 19 Q. And what documents, if any, did you review to 20 prepare for this deposition? 21 A. Oh, more or less, my notes, a report I 22 generated, I think there's some statements as well, 23 photographs, and then there was also a report from 24 David Wells, so I think that's the majority of it. 25 Q. Okay.</p>	<p style="text-align: right;">Page 7</p> <p>1 looked up that specific rack relative to the rack 2 involved in this incident, and what kind of force 3 versus displacement was involved in that testing. 4 MR. PRINCE-OLSEN: Let's start with this. 5 We'll have this marked as Exhibit 1, please. 6 (Exhibit No. 1 was marked.) 7 BY MR. PRINCE-OLSEN: 8 Q. And can you tell me, is this a true and 9 accurate copy of the report that you're providing in 10 this case? 11 A. It appears to be, yes. 12 Q. If you could turn to page 2 of that report, 13 please. Under Information Reviewed, could you just 14 take a look at that and let me know if there's 15 anything that you've reviewed either at the time that 16 you were drafting this report or after, that in any 17 way your opinions are based on? 18 A. Oh, as I said, I reviewed some additional 19 testing on bike racks; however, it doesn't alter my 20 opinions. It was just more for further confirmation 21 of my opinions. And I don't believe that I had any 22 additional documents after that, after issuing my 23 report. 24 Q. In the way that you in your report have 25 citations for various studies, could you provide me</p>
<p style="text-align: right;">Page 6</p> <p>1 When you say you reviewed your notes, what 2 are you referring to? 3 A. Oh, just out of all the documents I reviewed, 4 I just have a couple of sheets of notes of who's 5 involved, a couple of things of interest, you know, 6 the year, make, model of the vehicle, a variety of 7 things like that. 8 Q. Are those handwritten notes? 9 A. No. 10 Q. Okay. 11 Are those notes contained in the file that 12 you provided to us? 13 A. Yes, they should be. 14 Q. Where could I locate those? Sorry, I don't 15 mean to make you go through your entire file, but what 16 do they look like? 17 A. It would say ARCCA Case Review -- 18 Q. Got it. 19 A. -- on the top. 20 Q. Okay. Thanks. All right. 21 So other than the things that we've just 22 described, did you review anything else for today's 23 deposition? 24 A. Other than I looked at -- at ARCCA, we have 25 done some testing on a Yakima bicycle rack, so I</p>	<p style="text-align: right;">Page 8</p> <p>1 with a citation for the ARCCA studies related to the 2 Yakima bike rack that you reviewed? 3 A. Oh, I could send the data files over. They're 4 more or less Excel spreadsheets, but if you print them 5 out, they're several hundred pages long. But we could 6 certainly give you a digital copy. 7 Q. Okay. That would be great, if you could just 8 give that to Mr. Dawson. 9 A. Sure. 10 Q. Did you review -- in formulating your report 11 or your opinions for your report, did you review any 12 of Ms. La Croix's medical records? 13 A. No, I don't believe I had any -- her medical 14 records of any sort. 15 Q. Do you know what injuries Ms. La Croix is 16 alleging she sustained in this collision? 17 A. Honestly, I don't recall as I sit here today 18 if that was in any of the -- in the complaint. It 19 just wasn't something I looked at or memorized. 20 Q. And you've never met Ms. La Croix, correct? 21 A. Not to my knowledge. 22 Q. Have you taken any measurements of 23 Ms. La Croix seated in her vehicle? 24 A. I have not. 25 Q. I want you to turn to page 4 of your report.</p>

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<p style="text-align: right;">Page 9</p> <p>1 In the first paragraph there after the photo, you talk 2 about the Insurance Institute for Highway Safety and 3 testing on -- low-speed tests to assess the 4 performance of the vehicles' bumpers.</p> <p>5 Do you see that?</p> <p>6 A. I do.</p> <p>7 Q. Is it your understanding that those studies 8 involve collisions that are -- have a bumper-to-bumper 9 contact?</p> <p>10 A. I believe in this specific protocol, it was a 11 bumper to a simulated bumper.</p> <p>12 Q. And what is a simulated bumper?</p> <p>13 A. Oh, instead of just having another vehicle, 14 they, in essence, have something that mimics a bumper 15 mounted to a rigid barrier.</p> <p>16 Q. So something that acts like a bumper?</p> <p>17 A. Correct.</p> <p>18 Q. Okay.</p> <p>19 And something that's designed to take force 20 in the way that a bumper would take force?</p> <p>21 A. More than just a rigid wall, so, yes, 22 something that mimics the height and curvature and 23 some of the other characteristics of a vehicle bumper.</p> <p>24 Q. Do you know if, in any of the IIHS 25 simulations or tests with the simulated bumper, if any</p>	<p style="text-align: right;">Page 11</p> <p>1 the bumper and frame of the vehicle, so if you're 2 pushing on the bumper, it's in essence the same as 3 pushing on a bike rack.</p> <p>4 And in that stage testing, you get more 5 damage, or damage beyond the liftgate, so it just 6 tells us that the 6.2 mile per hour test speed, you 7 get greater damage than what we had in this incident.</p> <p>8 And then finally, as I said, we, at ARCCA, 9 have conducted testing to -- drawing a blank -- the 10 Yakima bike rack, and it actually shows that the 11 Delta-V would probably be even much less significant 12 than what we noted in the reports, based off of force 13 deflection, or basically bending of a bike rack until 14 it hits the rear window and hatch.</p> <p>15 Q. So at trial, it will be your testimony -- I'm 16 sorry -- will your testimony be that the Delta-V in 17 this case was significantly less than 7.9 miles per 18 hour? Or will you have a different calculation given 19 the ARCCA studies you saw on bike racks?</p> <p>20 A. Well, based off of the damage to the bike rack 21 in this incident and testing we've done on, in 22 essence, the same bike rack, I think -- I don't 23 remember the number off the top of my head, but it 24 places it closer to about a 5 mile per hour Delta-V, 25 so, yes, that would be significantly less than the 7.9</p>
<p style="text-align: right;">Page 10</p> <p>1 of those involved a simulated bumper that had a bike 2 rack?</p> <p>3 A. They do not conduct testing such as that, to 4 my knowledge.</p> <p>5 Q. Can you describe for me how you arrived at 6 your opinion that the Delta-V, or change of velocity 7 in this case was significantly less than 7.9 miles per 8 hour?</p> <p>9 A. Oh, certainly, yes.</p> <p>10 Q. Oh, sorry.</p> <p>11 Can you -- will you now --</p> <p>12 A. Sure.</p> <p>13 Q. -- will you describe it for me?</p> <p>14 A. Well, we looked at this a couple different 15 ways. One, obviously the damage to both vehicle 16 [sic], the lack of damage to -- or any significant 17 damage to the Ford Flex. In addition, the lack of 18 airbag deployment in the Ford Flex indicates that it 19 was generally below 8 to 14 miles per hour for that 20 vehicle.</p> <p>21 We have the Insurance Institute for Highway 22 Safety empirical test data, and we can actually use 23 that because the way the vehicle is designed, if 24 you're pushing on the bicycle rack, the bicycle rack 25 is mounted into a receiver hitch, which is mounted to</p>	<p style="text-align: right;">Page 12</p> <p>1 we note.</p> <p>2 Q. Have you examined the actual bike rack that 3 was involved in the subject collision?</p> <p>4 A. Other than the photographs, I have not, no.</p> <p>5 Q. And you haven't examined either of the 6 subject vehicles involved in the collision, right?</p> <p>7 A. Again, we had multiple repair estimates and 8 photographs and statements, but I did not lay hands on 9 the vehicle.</p> <p>10 Q. On that same page in the next paragraph, the 11 paragraph that begins: By the laws of physics, the 12 roughly second sentence there, it says: Therefore, 13 the average acceleration experienced during the rear 14 impact by the subject Honda Odyssey was significantly 15 less than 2.4 Gs.</p> <p>16 Do you see that?</p> <p>17 A. I do.</p> <p>18 Q. Can you tell me, why do you look at the 19 average acceleration in forming your opinions? What's 20 important about the average acceleration?</p> <p>21 A. Oh, you could look at this either in peak or 22 average, but a number of researchers in the field of 23 biomechanics and rear-end impacts note the -- there's 24 an association with the average acceleration and 25 injury potential. So it's -- it can be more</p>

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1 appropriate to use average just because that's what's
 2 done in the literature.

3 And also, if you look at how an impact occurs,
 4 the force obviously starts at zero, increases to some
 5 maximum, and then decreases to zero once again in, in
 6 essence, the shape of a bell curve. So to say it's a
 7 peak is pulling out one instantaneous moment in time,
 8 where the average is giving you a more fair
 9 representation of the overall event, so --

10 **Q. Right.**

11 **And I will -- I will admit to you a limited**
 12 **scientific understanding, but wouldn't peak**
 13 **acceleration be the most significant acceleration at**
 14 **any point during the course of a collision?**

15 A. No, it would be the highest of magnitude, but
 16 not necessarily the most significant.

17 **Q. Okay.**

18 **So couldn't injury occur -- well, isn't it**
 19 **possible that an injury could occur at the moment that**
 20 **the magnitude is the highest?**

21 A. Well, that's a very open-ended question, so it
 22 would depend on what injury, what magnitude, a variety
 23 of things like that, but in -- not in essence, but the
 24 human body is more equipped to withstand accelerations
 25 for a very brief amount of time. But if the

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1 type of forces or anything else, there's really no way
 2 of saying. But certainly we know people are injured
 3 when force is applied. So, yes, there has to be a
 4 point where somebody is injured.

5 BY MR. PRINCE-OLSEN:

6 **Q. Okay.**

7 **So to complete the hypothetical, you would**
 8 **need to know other data points such as that unique**
 9 **individual's susceptibility to injury?**

10 A. Possibly. Again, your hypothetical is so
 11 incomplete, I can't even say what I would or wouldn't
 12 need.

13 **Q. In order to know if a particular person could**
 14 **be injured during peak magnitude, what would you need**
 15 **to know about that individual?**

16 A. Again, I'd have to know more about the event,
 17 the environment, the forces involved, a variety of
 18 things like that.

19 **Q. Yeah.**

20 **What would you need to know about the**
 21 **individual specifically?**

22 A. I would still have to know about the event,
 23 then know what I need to know about the individual.
 24 So without knowing anything more about the event or
 25 what's actually being claimed, I can't tell you what

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1 acceleration is applied for a longer period of time,
 2 then it has a higher potential for injury.

3 **Q. But someone could, in fact, be injured during**
 4 **the height of magnitude in a collision, correct?**

5 A. Well, again, you have an incomplete
 6 hypothetical, so I can't say yes or no to that.

7 **Q. Is there any circumstance in which you**
 8 **believe a person could suffer injury at the moment**
 9 **that the magnitude is the highest in a collision?**

10 MR. DAWSON: Object to form. Answer if
 11 you can.

12 A. Well, again, it's an incomplete hypothetical.
 13 I don't know what type of --

14 BY MR. PRINCE-OLSEN:

15 **Q. Well, I'm asking you to complete the**
 16 **hypothetical. Is there any hypothetical situation in**
 17 **which you can envision someone being physically**
 18 **injured during the moment of peak magnitude?**

19 MR. DAWSON: Same objection.

20 A. Well, certainly, if you have an incredibly
 21 high-energy event where the force greatly exceeds the
 22 tolerance level of that unique individual, certainly
 23 there is potential there.

24 But without knowing really who you're talking
 25 about in this hypothetical, what type of vehicle, what

1 would need to be known about the individual either.
 2 It's kind of a whole system. You can't just pick one
 3 or the other.

4 **Q. All right.**

5 **So in order to arrive at accurate conclusions**
 6 **about someone sustaining injury in an accident, it**
 7 **sounds like you've said it's a whole complete picture.**
 8 **You can't look at just the collision forces and you**
 9 **can't look at just individual factors; you really need**
 10 **to know both?**

11 A. Well, more that I can't answer your question
 12 because it's incomplete. So, in general, when we're
 13 doing a biomechanical analysis, we try to gather as
 14 much data as possible.

15 **Q. Well, in an ideal world, if you had anything**
 16 **available to you, what else would you have wanted to**
 17 **view or examine in order to formulate your opinions in**
 18 **this case?**

19 A. I don't think there was anything else that I
 20 required to reach the opinions that I did.

21 **Q. So if you had had them available to you, you**
 22 **would not have wanted to review Ms. La Croix's medical**
 23 **records?**

24 A. I'm not offering any medical opinions. There
 25 might be some additional description in there of what

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1 did or did not occur that might allow for further
 2 confirmation, but I had more than enough information.

3 **Q. And that brings me to a point about**
 4 **essentially all of page 4 and page 5 of your report.**
 5 **It appears to me, in reading this, that you're looking**
 6 **at averages, but not discrete cases; is that correct?**

7 A. I'm not sure if I'm following you. I analyzed
 8 this specific event to see what the forces -- the
 9 magnitude of the forces were in this specific event
 10 and what would be applied to Ms. La Croix.

11 **Q. Is it your opinion that Ms. La Croix**
 12 **experienced any rebound into her seat as a result of**
 13 **this collision?**

14 A. Just making sure I understand your question.

15 Do you mean rebound away from her seat, so
 16 there's some prior contact and subsequent movement?

17 **Q. That's correct.**

18 A. So -- well, I think we noted in the report on
 19 page 5 that she would move rearward due to contact, or
 20 tend to move rearward due to contact from the other
 21 vehicle; therefore, she is going to go rearwards
 22 towards her seat.

23 **Q. So is that a yes?**

24 A. Well, I wouldn't call that rebound. That's
 25 just, she's moving rearward due to the contact to the

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1 **be able to answer that question?**

2 A. Oh, I guess I would start with some of the
 3 medical records, but I would have to see what
 4 additional documents might be required from reviewing
 5 those. Again, I haven't even begun to look at that or
 6 done any work to that regard, so I don't honestly know
 7 what I would or would not need.

8 **Q. That's okay.**

9 **We have a starting point that we'd want to**
 10 **look at some of the medical records and why. Why**
 11 **would we want to look at some of the medical records?**

12 A. Well, if we know what kind of biomechanical
 13 failures have been claimed to occur, then we can
 14 determine what kind of mechanism is required to create
 15 that, meaning both what magnitude and what direction
 16 or force application would be required, and that's
 17 just a basic starting point.

18 **Q. In reviewing a person's medical records to do**
 19 **an analysis like that, would it be important for you**
 20 **to know if that person had any prior injuries or any**
 21 **other conditions that might make them particularly**
 22 **susceptible to injury?**

23 A. Possibly. Again, it depends on what's being
 24 claimed, what type of event we're analyzing. And
 25 certainly a lot of preexisting conditions or prior

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1 rear of her vehicle. Or, in essence, what's really
 2 occurring, if you remember Sir Isaac Newton's basic
 3 laws of physics, an object at rest tends to stay at
 4 rest unless acted upon. She, relative to the vehicle
 5 is at rest, the vehicle is acted upon, it wants to
 6 move forward while she remains at rest, so relative to
 7 the vehicle, she moves rearward.

8 **Q. What -- what Delta-V or collision forces**
 9 **would have been required in this case to result in**
 10 **Ms. La Croix sustaining injury?**

11 MR. DAWSON: Object to form. You can
 12 answer if you can.

13 A. Oh, I wasn't asked to analyze that, so I don't
 14 have any opinions to that regard.

15 BY MR. PRINCE-OLSEN:

16 **Q. Well, I'm asking you if you can give an**
 17 **opinion in that regard.**

18 **What amount of force would have been required**
 19 **in this case to have caused Ms. La Croix to sustain**
 20 **injury?**

21 MR. DAWSON: Same objection.

22 A. Again, I have not analyzed that so I cannot
 23 answer it.

24 BY MR. PRINCE-OLSEN:

25 **Q. What information would you need to analyze to**

1 conditions are noted in the medical records, so it
 2 might have been included in that. And, again,
 3 depending on the magnitude of the event, that might
 4 not come into play.

5 **Q. Okay.**

6 **But worth -- you would agree that it's worth**
 7 **taking a cursory look at?**

8 A. Certainly you would like to look at this
 9 individual and see, you know, who you're dealing with.
 10 If you're looking at a unique individual in a unique
 11 event, you would like to have some understanding of
 12 that individual.

13 **Q. And sitting here today, you don't have an**
 14 **understanding of the injuries claimed or the prior**
 15 **medical history of the unique individual in this case,**
 16 **Kristin La Croix?**

17 A. Correct. I'm not offering any opinions on
 18 whether or not any type of injury or biomechanical
 19 failures actually occurred. I'm opining on the
 20 forces, kinematics, and giving a trier of fact some
 21 better understanding of what this event would be --
 22 you know, what they might compare it to, and some
 23 other real-world activities that they might have
 24 experienced or something that they can relate to. Not
 25 everybody's been in a motor vehicle accident or knows

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1 what 2.4 Gs actually is, or a variety of things like
 2 that.

3 **Q. Could you go to -- it's page 6 in your**
 4 **pagination or 37 in the pagination in the bottom**
 5 **right.**

6 A. Okay.

7 **Q. Could you just review your conclusions for**
 8 **me -- I'll give you a minute -- and let me know if**
 9 **there's anything that you'll be testifying to at trial**
 10 **that differs from what is listed in your conclusions**
 11 **in this report?**

12 A. Oh, again, aside from number 2 where we say
 13 the severity of the rear impact during the subject
 14 incident was significantly below 7.9 miles per hour,
 15 with an average acceleration less than 2.4 Gs, again,
 16 it's not changing because it's still below, but it's
 17 probably closer to, I think, 5 miles per hour; in a
 18 peak acceleration, less than -- oh, it's getting
 19 closer to 1 G.

20 So, again, it's not changing anything. It's
 21 still below all of that. But we might have a
 22 different value for the Delta-V in acceleration.

23 **Q. Okay.**

24 **And what you just said, you said the peak**
 25 **acceleration is getting closer to 1 G, what would the**

1 **to your report that reflects the changes in your**
 2 **opinions following your testing of the bike rack?**

3 A. I don't plan to, but, you know, if I'm asked,
 4 I probably would certainly provide one. But at this
 5 point, I've not been asked to provide a supplemental
 6 report.

7 **Q. Can you describe for me, when you talk about**
 8 **the testing that you did on the bike rack, what did**
 9 **that testing entail?**

10 A. Oh, taking a bike rack, a receiver hitch
 11 rigidly mounted to a hydraulic test fixture that
 12 allows you to both measure the force and displacement
 13 of the bike rack as you apply, you know, increasing
 14 force to it until failure occurs.

15 **Q. And what does failure look like?**

16 A. Oh, just -- I guess, in essence, two separate
 17 criterion; one where you have permanent deformation,
 18 and, two, such that you would have contact with the
 19 vehicle or contact similar to what we have. So enough
 20 displacement that the bike rack is permanently
 21 displaced and contacting the vehicle.

22 **Q. And is it your opinion that failure in the**
 23 **way that you just defined it here occurred in this**
 24 **case as a result of the collision?**

25 A. Oh, certainly, yes.

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1 **average acceleration be?**

2 A. Oh, again, if we just simply, well, halve
 3 that, then we're going to get down to what the average
 4 acceleration would be, right?

5 **Q. So having what, 2.4, so you're looking at 1.2**
 6 **average? Or I'm sorry. I'm not clear.**

7 A. No. If we're looking at the way conclusion
 8 number 2 is written, if I wrote it to have a peak
 9 acceleration instead of average acceleration, for that
 10 same 7.9 miles per hour, we would say the peak
 11 acceleration was less than roughly 4.8 Gs.

12 But based off of the testing of the bike rack,
 13 the peak acceleration is actually closer to 1 G. So,
 14 again, pretty significantly below.

15 **Q. Okay.**

16 **Other than what we just talked about with**
 17 **respect to number 2, any other changes in your**
 18 **opinions? Or do those appear to be what your**
 19 **conclusion will be that you'll testify to at trial?**

20 A. Unless I have received some additional
 21 information or something changes with documents that
 22 I'm unaware of, I don't plan on offering any different
 23 opinions.

24 **Q. Okay.**

25 **Do you plan on providing a written addendum**

1 **Q. Okay.**

2 **So the bike rack, as a result of this**
 3 **collision, suffered permanent deformation and had**
 4 **contact with the vehicle?**

5 A. Correct.

6 **Q. Moving to opinion number 4, you say: The**
 7 **acceleration experienced by Ms. La Croix in this**
 8 **incident was well within the limits of human**
 9 **tolerance.**

10 **Can you just describe for me what you mean**
 11 **when you say that the acceleration experienced was**
 12 **well within the limits of human tolerance?**

13 A. Oh, sure. If you look back, I think, at the
 14 bottom of page 4, we start with a few
 15 things: Just simply that hard brake application can
 16 be .7 to .8 Gs, so below 2.4 Gs, but just gravity
 17 itself is 1 G. And then if you start to do any
 18 movement, you know, climbing stairs, standing on one
 19 leg, a variety of things like that, you can certainly
 20 see multiple Gs, and doing something as simple as
 21 doing a jumping jack, you can see 3 Gs of force.

22 So it's not anything that you might see just,
 23 you know, going about your day-to-day life, exercise
 24 or work or a variety of things like that. And it's
 25 certainly possible you could see that just while

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1 driving a vehicle. I don't know if I listed here, but
 2 hitting potholes and speed bumps and a variety of
 3 things like that could easily get up to 2 to 3 Gs,
 4 again, depending on the size of a pothole or speed
 5 bump and the speeds involved.

6 **Q. But you'd agree that all the activities that**
 7 **you just described at least have injury potential for**
 8 **a discrete individual, right?**

9 A. I don't know of any individuals who really
 10 just suddenly suffer some catastrophic failure simply
 11 by walking unless they misstep or something else is
 12 occurring. But just through normal gait, you know,
 13 normal activity, it -- things such as disc herniations
 14 certainly do not occur at those magnitudes. Again,
 15 certainly you can roll an ankle or something like
 16 that, but that's a little bit different.

17 **Q. Okay.**

18 **But you mentioned a jumping jack. Is it your**
 19 **opinion that a discrete individual could not be**
 20 **injured with the forces that are applied to the body**
 21 **in a jumping jack?**

22 A. Again, if you're just jumping and not slipping
 23 and falling and rolling your ankle, no. It's just --
 24 unless you had a highly unique individual, maybe
 25 somebody who had just had some significant surgery,

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1 but, in essence, if you can get out of bed and go
 2 about day-to-day life, you could withstand a jumping
 3 jack.

4 And, again, if jumping jacks caused any type
 5 of significant biomechanical failure, I don't know how
 6 much physical education is done in schools anymore,
 7 but it's been done for decades and decades in
 8 elementary school and middle school and high school
 9 and gyms and everywhere else, you would have an
 10 unlimited number of people having significant trauma
 11 by doing a benign task.

12 **Q. Okay.**

13 **But you keep going back to this unique**
 14 **individual, and I'll grant you that, with respect to**
 15 **the jumping jack, you said it would be highly unique**
 16 **individual.**

17 **But your testimony, if I'm understanding it**
 18 **correctly, is, if you had a highly unique individual,**
 19 **it is possible that a discrete individual could be**
 20 **injured as a result of the forces applied to the body**
 21 **in a jumping jack.**

22 A. Sure. You would have to, again, have somebody
 23 who is highly unique. Again, had they had some very
 24 significant trauma, let's say they just broke their
 25 bone in their leg and it's not been set or not wearing

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1 a rigid cast, certainly they could be reinjured by
 2 doing a jumping jack. So that would be a much -- you
 3 know, a highly unique individual.

4 **Q. Sure.**

5 **So you really need to know things about that**
 6 **unique individual and not the average population**
 7 **performing jumping jacks, right?**

8 A. If we're analyzing a specific individual and a
 9 specific incident, yes.

10 **Q. Okay.**

11 **And we are in this case analyzing a specific**
 12 **incident and a specific individual, are we not?**

13 A. I'm, again, looking at the forces and
 14 comparing those forces to a variety of other
 15 activities. Again, I'm not offering any opinions on
 16 biomechanical failures or causation.

17 **Q. Can we look at -- it's attached to your**
 18 **report -- your CV? It should be the last few pages.**

19 **Do you see that?**

20 A. I do.

21 **Q. I want to ask you about your educational**
 22 **background. Can you tell me what it means when it**
 23 **says in your academic background Ph.D. Candidate at**
 24 **Tulane University?**

25 A. Sure. I was at Tulane during the time of

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1 Hurricane Katrina, and because of that, school was
 2 closed for, I think, at least a year, if not longer.
 3 Members of faculty left, including members of my
 4 committee, and because of that, while I had completed
 5 all the educational requirements, testing, research,
 6 teaching, anything that would be required except for
 7 defending my dissertation, because of that delay, I
 8 just did not pursue my Ph.D. beyond or to defend my
 9 dissertation, but I completed all the other academic
 10 requirements.

11 And so if you look at the guidelines from
 12 Tulane, the School of Biomedical Engineering, the text
 13 or the guidebook, the level I achieved -- or if I were
 14 to reenter school, I would be considered a Ph.D.
 15 candidate. So it's just a succinct way of saying what
 16 I had accomplished during my time at Tulane.

17 **Q. Okay.**

18 **And Tulane to this day continues to have a**
 19 **biomedical engineering program, right?**

20 A. I believe so, yes.

21 **Q. Okay.**

22 **And that program is still awarding Ph.D.s,**
 23 **correct?**

24 A. I haven't been following it, but I assume
 25 that's -- that's still the case.

7 (Pages 25 to 28)

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1 **Q.** And as far as you know, Tulane is open and
 2 the department's open were you to decide to defend
 3 your dissertation, correct?

4 A. Correct.

5 MR. PRINCE-OLSEN: Let me get this marked,
 6 please, Exhibit 2.

7 (Exhibit No. 2 was marked.)

8 BY MR. PRINCE-OLSEN:

9 **Q.** Mr. Probst, I'm handing you Exhibit 2, which
 10 I believe is also in your file, and I will represent
 11 to you is the report of accident reconstructionist
 12 David Wells.

13 Have you examined this report before?

14 A. I have.

15 **Q.** Okay.

16 And I won't ask you to, like, review this in
 17 its entirety at this moment, but do you recall, from
 18 when you reviewed this, if there was anything about
 19 this report that you disagreed with?

20 A. Oh, not -- no, not to any real degree. We
 21 both said that, you know, it's -- he has, I think,
 22 8.9 miles per hour for the maximum speed, but
 23 that's -- I think he has that as an impact speed and
 24 has a Delta-V slightly below that.

25 But I -- when analyzing any incident like

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1 structure, if you will, so it still can have bumper
 2 loading, I guess, is the most fair way to describe it.
 3 BY MR. PRINCE-OLSEN:

4 **Q.** Sure.

5 **But would you expect to see permanent bumper**
 6 **deformity where there was not bumper-to-bumper**
 7 **contact?**

8 A. If you have forces applied, even if it's
 9 indirectly, I would expect it based off of the
 10 empirical crash data for the Honda, yes.

11 **Q.** And I'm sorry.

12 **Why -- why would you expect to see permanent**
 13 **deformity to the rear bumper of the Honda?**

14 A. Well -- and maybe this is the easiest way to
 15 describe it -- that in a 6.2 mile per hour rear-end
 16 impact to a Honda Odyssey, you get damage to the
 17 rear -- I just want to make sure I'm using their exact
 18 same terminology -- but the floor of the rear body has
 19 some damage.

20 So obviously, then, the bumper would be
 21 mounted to structures that attach to the floor. If
 22 the floor is deformed, you're deforming the rear
 23 bumper as well.

24 And so if you're pushing on the back of the
 25 vehicle, you can still deform the floor. Whether

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1 this, I always give the benefit of the doubt to the
 2 opposing side and try to make it the most severe event
 3 that I possibly can.

4 **Q.** So you don't -- you don't disagree with his
 5 calculation of the impact speed or the Delta-V then?

6 A. No. Again, I think I said it was below
 7 7.9 miles per hour, and he has it, you know, 5.9 miles
 8 per hour, so I'd still -- you know, it's certainly
 9 below the 7 miles per hour, so we're in agreement.

10 **Q.** In both your report and in Mr. Wells' report,
 11 there's a reference -- it may not be worded the same
 12 way, but both of you refer to the fact that there was
 13 no residual crush to the rear bumper of Ms. La Croix's
 14 vehicle; is that correct?

15 A. I don't recall if he says that, but I don't
 16 believe that there was any significant permanent
 17 deformation to the bumper, correct.

18 **Q.** Okay.

19 **But this wasn't a bumper-to-bumper impact as**
 20 **we've discussed, correct?**

21 MR. DAWSON: Object to form. Answer if
 22 you can.

23 A. It was not a direct bumper-to-bumper impact
 24 because the bike rack was in between. However, you
 25 can still apply loads and forces to the bumper

1 you're pushing on the back through the bumper, through
 2 the receiver hitch or through the receiver hitch and
 3 directly through a bike rack, it's all still going to
 4 the floor one way or the other.

5 **Q.** Okay.

6 **MR. PRINCE-OLSEN:** Can I have this marked,
 7 please, Exhibit 3?

8 (Exhibit No. 3 was marked.)

9 BY MR. PRINCE-OLSEN:

10 **Q.** Mr. Probst, this is an email from your file
 11 from Mr. Dawson. I just want you to look at the
 12 second paragraph there. Could you just read the first
 13 line of that second paragraph to me, please?

14 A. The one that begins "I realize"?

15 **Q.** Yes.

16 A. "I realize that it is difficult to perform any
 17 detailed or thorough analysis without being able to
 18 examine/inspect the actual rack itself."

19 **Q.** And would you agree with that statement?

20 A. No.

21 **Q.** Why not?

22 A. Because it's not difficult to do.

23 **Q.** What is not difficult to do?

24 A. To analyze what type of forces would be
 25 required to cause the deformation to the rack in this

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1 incident. It might be difficult to somebody who
 2 doesn't have testing background or an engineering
 3 background, but for somebody like myself, it's not a
 4 difficult task.

5 **Q. If the bike rack -- the subject bike rack
 6 were still in existence, would you want to examine it?**

7 A. Oh, it would certainly, you know, be nice, and
 8 then I can answer questions in affirmative that, yes,
 9 I have inspected it. Again, it's not necessary,
 10 but -- it certainly would allow me to possibly be more
 11 precise, but not any more accurate in my analysis.

12 MR. PRINCE-OLSEN: So let's just take,
 13 like, a five-minute break. Let me just look at my
 14 notes and we might be done.

15 THE WITNESS: Sure.

16 (A break was taken from
 17 10:03 to 10:09 a.m.)

18 BY MR. PRINCE-OLSEN:

19 **Q. Mr. Probst, is it your opinion that the
 20 Delta-V that you opine occurred in this case would
 21 have been sufficient to cause the front seat belt
 22 locking mechanism that Ms. La Croix was using to
 23 engage?**

24 A. The front seat belt would lock by Federal
 25 Motor Vehicle Safety Standards, correct.

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1 **were sufficient to cause Ms. La Croix, after moving
 2 backward toward the seat, to then be moved in a
 3 forward fashion?**

4 A. Well, obviously the vehicle came to a stop
 5 after this incident, so there had to be some
 6 deceleration of her vehicle through a brake
 7 application. But she would move, in essence, no
 8 different than somebody would be moving during any
 9 other brake application.

10 **Q. Which is to say, backward, then forward?**

11 A. Potentially. I mean, it could be highly
 12 insignificant forward motion. I'm not sure if an
 13 average person, if you asked them: Define how they
 14 move when they apply the brakes in their vehicle, if
 15 they would say they move at all. But the potential,
 16 because there is forces in that direction due to brake
 17 application, could be there. But you also have your
 18 foot on the brake, hands on the steering wheel, muscle
 19 activation and the seat belt itself.

20 **Q. Okay.**

21 **But in this collision, the forces were
 22 sufficient for at least the potential of
 23 Ms. La Croix's body to have moved appreciably forward
 24 after first having moved backward?**

25 MR. DAWSON: Object to the form. Answer

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1 **Q. What is the threshold at which the locking
 2 mechanism in a seat belt is supposed to engage?**

3 A. It's .7 Gs; however, because there's some
 4 other scenarios that can lock the seat belt, it could
 5 be as slow as .3 G, but .7 G is a safe number.

6 **Q. And, again, you haven't seen any photos or
 7 done any measurements of Ms. La Croix actually seated
 8 in her vehicle, correct?**

9 MR. DAWSON: Object to form. Answer if
 10 you can.

11 A. I do not have any photographs of her seated in
 12 the vehicle, correct.

13 BY MR. PRINCE-OLSEN:

14 **Q. Would it be important for you to know, for
 15 example, where the seat belt crossed her body to know
 16 how her body individually might have sustained the
 17 forces in this collision?**

18 A. No. Again, in this particular incident, the
 19 primary means of restraint is the seat, seat back and
 20 head restraint, because the occupant tends to move
 21 rearward. And then, you know, that's really the --
 22 again, the primary means of restraint. So you're, in
 23 essence, moving away from the seat belt at that point
 24 in time.

25 **Q. Do you believe the forces in this collision**

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1 if you can.

2 A. You would have to define "appreciably."

3 BY MR. PRINCE-OLSEN:

4 **Q. Let's say enough for her to notice. You
 5 mentioned that some people wouldn't notice that
 6 movement, but enough for her to notice.**

7 A. I'm not sure if I can give a fair scientific
 8 answer to that in the sense that we're now discussing
 9 somebody's perception, and somebody might perceive
 10 that they moved when, in fact, they did not. And so
 11 certainly somebody might have that perception, but it
 12 might not necessarily mean that they moved at all.

13 **Q. Okay.**

14 **Let's take away someone's perception, then,
 15 and just ask: Do you think there were forces in this
 16 collision sufficient to cause Ms. La Croix's body to
 17 move first backward and then forward?**

18 A. Now we're asking a slightly different question
 19 than what you asked previously, but certainly based
 20 off of the magnitude of the contact to the rear of the
 21 vehicle, you could have some rearward motion. And
 22 then, again, if this individual moves normally forward
 23 during brake application, then that might occur as
 24 well.

25 But if you're asking, do they spring off of

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1 the seat or trampoline or anything like that,
2 that's -- that certainly does not happen based off of
3 physics and seat design and a variety of other
4 reasons.

5 MR. PRINCE-OLSEN: All right. I have no
6 further questions.

7 MR. DAWSON: Nothing from me.
8 (Deposition concluded at
9 10:14 a.m.)

(By agreement between counsel and witness, signature was waived.)

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CERTIFICATE

STATE OF WASHINGTON)

) ss.

COUNTY OF KING)

I, ANITA W. SELF, a Certified Shorthand Reporter in and for the State of Washington, do hereby certify that the foregoing transcript is true and accurate to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF, I have hereunto set my hand
and seal this 26th day of September 2018.

Anita W. Self
ANITA W. SELF, RPR, CCR #3032

ANITA W. SELF, RPR, CCR #3032

10 (Pages 37 to 38)

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